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ABSTRACT

Teacher-child relationships are complex phenomena which can be described and observed from a variety of angles, on many different levels. Recent research contributes some information applicable to the analysis of teacher-child relations and identifies issues for further study. Teacher functions or duties may depend, in part, upon the teacher's background and the demands of her program. Although four types of functions are defined (maternal, therapeutic, facilitator, instructional), no research has yet been done to investigate teachers' time distribution among these role functions. While the characteristics of teachers can be examined in two broad classes, attributes and behaviors, the research is difficult to synthesize and summarize. However, it provides indications that teachers may need help in developing skills to extend the information processing abilities of pupils and to build more constructive classroom climates. These skills need to be clearly identified. Research invclving larger sample sizes is needed to support studies assessing the predictability of teacher behavior from the specifications of curriculum models. Few studies deal with the effects of teachers on children. Welcome additions to the existing body of concepts are expected from the Planned Variation Experiment with Head Start curriculum. References are given. (WY)

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Teacher-Child Relationships in Day Care Centers*

Working Paper

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TEACHER-CHILD RELATIONSHIPS IN DAY CARE CENTERS

Lilian G. Katz, Ph.D.

Although early childhood specialists approach their work from diverse theoretical and philosophical positions, almost all of them agree that the role of the teacher is a central one. In this section we shall explore some of the concepts applicable to the analysis of teacher-child relations in day care settings, review some of the recent research, and attempt to identify some issues for further study.

It hardly needs to be emphasized here that teacher-child relationships are c omplex phenomena which can be described and observed from a variety of angles, and on many different levels. For the purpose of classification, we can discuss the problems of teaching in day care centers in terms of categories of functions; for the purposes of description and observation, we can examine characteristics of teachers in terms of categories of attributes (e.g., age or experience) and categories of behavior (e.g., giving or not giving praise to pupils); and for purpose of analysis, we can describe teacher-child relationships in terms of categories of effects. In the following discussion, we shall try to examine each of these categories of teacher-child relationships in turn.

Teacher Functions

When we classify teachers in terms of their functions in the school setting, we refer to the special duties and responsibilities associated with their role. The teachers' role can be thought of as a pattern of expected behaviors by means of which she fulfills her functions (see Hoyle, 1969). In a general way, the functions of teachers (at every level of education)

are defined by historical and contemporary social pressures and demands (Grambs, 1965).

The functions of a preschool teacher are varied. However, from time to time, one or two of her functions receive more emphasis than others. The welfare or "care" functions of the day care teacher have been strongly emphasized, and have been patterned along the lines of a maternal role model. The maternal model emphasized the teacher's responsibility to safeguard children's health and safety and to keep children comfortable and busy with constructive activities (Mayer, 1967; Howley, 1967; Kitano, 1963; Swift, 1964). In nursery schools as well as day care centers, a therapeutic role model, emphasizing the young child's need for emotional support and insightful guidance, has been common. Two other role models also have an important place in preschool education: the facilitator role model, and the instructional role model.

Both the maternal and therapeutic models and their associated functions have been somewhat derived in recent preschool literature (Katz, 1970a; 1970b). However, when considering the role of the teacher in day care settings, they are role models which must be taken seriously, primarily because the length of the day requires teachers to function both as mothers and teachers.

In an interesting study of the contrasting effects of long versus short day preschool education Handler (1970) points out that the distinction between the functions of the two types of preschools is carried over into their names, with the short day institutions being called "schools", and the long day institutions "day care centers". The contrasts between nursery school teachers and day care workers were expressed at the National Conference on Child Care as follows:

> ...the longer and more complicated hours of care demand more numerous and more sensitively rendered services. Not only does he (the day care worker) have to do a good deal of parenting, without the position of parents, but he must do remedial educating and often be supportive through long term emotional crises. He may oversee proper nourishing for the malnourished, assist in toilet training and speech development for the maturationally slow, and become a major figure in the child's emotional and social life (Proceedings, p. 26)

In fact, in many centers, the young child spends more of his waking hours with his teacher than with his mother. Teacher-child relationships in day care centers are likely to have powerful emotional components. Thus, the day care teacher must respond to strong demands to function in a maternal role.

In addition to such demands for mothering, it can be expected that teachers will be called upon to fulfill those functions we may call "therapeutic". Such functions include helping children not only with the normal conflicts and tensions of early childhood, but in addition, helping them with the hazards particular to the young child who is separated from home and family all day long (Hosley, 1965, Prescott & Jones, 1967; Swift, 1964). Furthermore, some of the informal literature concerning care for young children suggests that the children enrolled in day care centers come to the center having experienced more emotional stress and strain than other children. Therefore, it seems reasonable to expect that an observational study comparing teachers in day care centers to teachers in short-day schools, would show that a large proportion of day care teachers' time would be given to maternal and therapeutic functions, especially as contrasted with instructional functions.

Research concerning teachers' time distribution in day care settings has not been found. Studies of teachers in short-day preschool programs,

however, suggest that there are wide individual differences between teachers in the way their time is allotted. Wilensky (n.d.) reported the results of observing five nursery school teachers during the indoor play period, using the Teacher Play Period Rating (TPPR) instrument. The data thus obtained were categorized under two broad headings: (1) time spent with children, and (2) time out of contact with children, each of these headings having sets of sub-categories. Three interesting findings apply to this discussion. First, during the play period, teachers were out of contact with children an average of 26%* of the time. Secondly, when teachers were in contact with children, they were engaged in what the TPPR classified as "informal teaching" only 18% of the time. Almost all of the remaining behavior of the teachers fit maternal role expectations. Finally, the differences between the five teachers were large and probably significant.

Katz (1968) reported observations of six Head Start (short-day) teachers over the whole of the schooling period. Although the teachers' behavior cannot be classified in terms of functions, it is interesting to note that the average proportion of time that the six teachers were out of contact with children was also 26% (range from 15% to 40%), with the differences between teachers being significant. The Department of Research of the Montgomery County Public Schools (1968) reported baseline data of adult behavior in 13 Head Start classes. Adults' activities were divided into eight categories. The observations revealed that "the overwhelming majority of adults (88.3%) were active in only three of the 8 categories listed: talking and listening (34.6%), direct instruction (27.0%) and routine activities" and

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*The averages were computed from the combined data shown in Tables 13 and 15 (pp. 41 & 43) of Wilensky' report.

suggest that the high frequency behaviors in this category fit the maternal role model functions.

Prescott and Jones (1967), in a comprehensive study of teachers and directors of 57 day care centers in the Los Angeles area, found that 58% of the directors, and 41.3% of the teachers gave responses to questions about their roles which the investigators called "ambiguous" because they assigned themselves a combination of roles (pp. 185-194) suggesting role confusion.

Further indications that the functions of preschool teachers are diverse and ambiguous comes from a pilot study by Handler (1970a). Handler interviewed and observed 21 preschool teachers and asked them to rank five goal statements in their order of importance. The goal statements represented five role models as follows: socialization, instructional, custodial, therapeutic, and stimulation. Handler reported that the teachers' responses showed widespread disagreement, and that "the least acceptable goal was that of providing information," i.e., the instructional model. The custodial model was rejected by almost half of the respondents, and:

> The therapeutic model was about evenly valued and rejected. The stimulation model found more backers, and the socialization model was supported by more than half the group. However, the spread in rankings was more striking than the extent of agreement. Perhaps the most interesting finding was the difference in ranking by teachers in the same (school) group (pp. 12-13).

Another kind of preschool, Montessori, first developed in order to provide long day care for the children of working mothers. Although the Montessori method did stress the children's exercise in "practical life tasks", the major function of the teacher probably was to facilitate cognitive learning rather than to meet the children's social and emotional needs (Jensen & Kohlberg, n.d.; Cox, 1968). The Montessori day care teacher more closely

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matches the facilitator model than either the maternal or therapeutic models (see also Weber, 1969).

In summary, we can see that day care teachers' functions, while weighted in the direction of the maternal model, include all of the possible functions of teachers of young children. In the absence of clarifying data from more extensive research, we have no reliable way to evaluate the function or role models of day care teachers. It seems plausible that long-day teachers will have to serve many functions and thus perform many roles. The length of the day, plus the immaturity of the child, suggest that future planning and research should concern itself with investigating the question; what is the optimal distribution of teachers' time in terms of her functions; or, to what extent should each role function be emphasized?

Characteristics of Teachers

For the purposes of this discussion, the characteristics of teachers are divided into two broad classes: attributes and behaviors. By attributes we are referring to qualities or characteristics which, as it were, "belong"to the teacher, such as her age, ethnic origin, goals and attitudes. The term behavior is used to describe what she can be observed to do, i.e., her performance or interaction with others in the classroom.

One problem encountered in the study of teacher-child relationships concerns the extent to which the attributes or behaviors of interest can be specified and observed. To a very large extent, the teacher variables we are interested in must be inferred from global or non-specific behavioral events. Rosenshine (1970) identified two levels of inference in categorizing teacher behavior. According to Rosenshine's scheme, those behaviors of the teacher which are specific, denotable and able to be identified with relative objectivity, are called "low-inference variables". Examples of low inference

teacher attributes are the teacher's age, number of years of teaching, and her college degrees. Examples of low inference behavior are "teacher smiles" or "teacher claps her hands". Rosenshine defined "high inference" variables as those which lack specificity; they are difficult to denote or observe objectively. Examples of high inference teacher attributes are goals, attitudes, or level of commitment to the profession. Examples of high inference behaviors are "warmth" or "encouragement".

For the study of teacher-child relationships in preschools, we are in need of a third level of variables which we can designate as "ultra high inference" variables. In this category is included the curriculum model or preschool approach. It seems reasonable to assume that there are differences in both the attributes and behaviors of teachers in such contrasting curriculum models as the Bereiter-Becker-Engelmann, Montessori and the Bank Street curricula. From the official definitions and descriptions of these curriculum models we can infer that there are differences in teacher attributes and behaviors; but unless data are provided by which to identify these inferences as high or low levels, then curriculum model lables and definitions must be considered ultra-high inference teacher variables. A major proportion of recent research and evaluation studies in early childhood education consists of investigations of the impact of different programs. The most notorious of these studies is the often-cited "Westinghouse Report" (Cicarelli, 1969). Rosenshine comments on the futility of the Westinghouse treatment of "Head Start impact" as a single variable:

> In this study a group labeled "Head Start Children" was compared with control children...But is there a single treatment that can be labeled "Head Start"? (1970, p. 280)

Perhaps treatment variations were assumed to be randomized in a study of some 100 Head Start centers. However, when a preschool method or curriculum model is employed as an independent variable upon which given child outcomes depend, (e.g., Karnes, 1968; Weikart, 1969: Erickson, 1960; Halasa, 1970), then the attributes and behaviors of teachers are inferred at an ultra-high level unless they are empirically verified at lower levels.

In summary, the typology of teacher variables being proposed can be schematized as follows:

TYPE OF VARIABLES	TEACHER CHARACTERISTICS	
	Attributes	Behaviors
ultra-high inference	e.g. Curriculum model such as Montessori, DARCEE, Bank Street	
high inference	e.g. goals, attitudes	e.g. warmth restrictiveness
low inference	e.g. age, ethnicity	e.g. smiles, sings, touches child

Figure 1. Schematic Representation of a typology of Teacher Characteristics in terms of level of inference.

Teacher Attributes

The designation of a preschool teacher as a 'Montessori teacher' or a 'Traditional teacher' (or not uncommonly as 'a little old lady in white tennis shoes') exemplifies categories of teacher attributes at an ultra-high level of inference. That is, what attributes of the teacher do we know about when we have the curriculum model lable?

Jensen and Kohlberg (n.d.) studied the outcomes of three eight-week summer preschool classes for prekindergartners in Chicago. The goals of the three teachers involved were identified in interview sessions. Sharp

differences between teachers or goals wer apparent. One teacher, exemplifying the therapeutic role model, stated that her goals were providing "emotional support and helping the children to enjoy school...to express themselves and to feel that their expressed feelings would be met by understanding and acceptance" (p. 28). Another teacher gave as her major goal "preparation of the children for public school...trying to give each child a feeling of worth and pride about himself. To increase socialization and verbalization," etc. (p.39). The third teacher, who was Montessori trained, emphasized the goal of promoting the child's individual learning "...according to his own interests and level of attainment, choosing from the activities available to him with the teacher as observer and guide...maintenance of an order in the classroom" etc., (p. 50-51).

The selected accounts of the teachers' classroom functioning given (in the above study by Jensen and Kohlberg) indicate substantial differences between the three teachers. The small sample precludes generalization, but the study does emphasize the urgency of identifying the elements in the gap between curriculum rhetoric and teacher performance. It has been suggested elsewhere (Katz, 1970) that labeling teachers as "traditional" or "structured" may simply reflect stereotypes which include variables from each of the two lower levels of inference. Studies of these stereotypes would be helpful. Studies also of the possible "natural proclivities" of potential teachers for given curriculum models would also be valuable additions to the field.

For teacher attributes at the next level of inference we turn to discussions of such teacher variables as goals, attitudes and degree of commitment.

Teacher commitment in a discussion of the role of the teacher in the implementation of early intervention programs, Sigel (1969) stated that

> the success of these intervention programs is ultimately dependent on teachers' acceptance, commitment, and skills in carrying out programs (p. 1).

In this statement, Sigel suggests two types of teacher variables: the high inference type ('acceptance' and 'commitment') and the low inference type ('skills').

Little is known about the general occupational commitment of either nursery school teachers or day care teachers. In the Handler (1970a) pilot study of preschool teachers' professional self-image, 14 of her 21 S's expressed unqualified commitment to preschool teaching, with more of the long-day than the short-day teachers exhibiting such occupational commitment (cf. Handler, p. 15). A 1962 study of nursery school teachers in the Los Angeles area reported by Jones (1963) indicated that 73% of the respondents expected to stay in the field. Since Jones suggests that most of the teachers she surveyed were teaching "primarily on the basis of convenience rather than on the basis of identification with a profession" (p. 31), it is difficult to evaluate the observed high level of commitment.

Sigel (1969) further asserts that "if the teacher is an enthusiastic knowledgeable professional with a positive attitude and high morale toward the (new) program, to that degree will the program work" (p. 2). One hypothesis which can be derived from Sigel's assertion is that the level of commitment the teacher has to a given curriculum method or role model is a more powerful predictor of positive program outcomes than the curriculum or role model alone. For an interesting experiment involving the question of teacher commitment to the curriculum method, we refer to the work of Erickson (1969) and his associates at the Center for Sociological Research at Kalamazoo, Michigan.

The primary objective of Erickson's research was to assess the immediate and long range academic and personal adjustment effects of a highly-structured academic preschool program - the Bereiter-Engelmann approach - as contrasted with a traditional developmentally-structured Head Start program - the Enrichment Preschool. Another objective of the research was to determine whether the impact of these two contrasting programs was dependent on the initial attitudes of the teachers toward their respective curriculum models.

The teachers (N=14) were hired by the school district and given a 22-item questionnaire designed to measure their attitudes towards academically structured preschool methods. The teachers were then ranked and split into two groups: one group "most opposed" and the other, "least opposed" to academically oriented preschool methods. The latter group included 5 teachers who had very positive attitudes towards the academic approach; the former group included 7 teachers with very negative attitudes. Each of the two groups was then split into sub-groups of three and four teachers, who were assigned to the two types of experimental treatments; i.e., the Bereiter-Engelmann and the Enrichment Program.

At the end of the preschool year, the children were given the Stanford-Binet IQ test, among others. According to the IQ data, the children in both curriculum methods made significant gains, especially when compared to a no-treatment group. The teachers' initial attitudes towards the curriculum models were <u>not</u> associated with differences in those gains. Erickson also reported that the teachers' attitudes towards the Bereiter-Engelmann program "tended to become quite favorable" after experience with it. He states that "post-treatment attitudes are more relevant than pre-program attitudes in predicting classroom outcomes" (p. 38). Interpretation of the statement awaits Erickson's further data analysis. We do not know whether or how the

Bereiter-Engelmann program "grew" on those teachers who were pre-experimentally negative towards it.

From Erickson's data we do not get confirmation for the hypothesized effects of teacher commitment to a particular curriculum method. The children of teachers who had negative attitudes towards the Bereiter-Engelmann methods made and maintained substantial gains in IQ. Several questions are raised by such a finding. Does the extent to which teacher commitment affects implementation of a curriculum method differ according to the method? It should be noted that the Bereiter-Engelmann method is centered around a teacher "manual", and may therefore be relatively teacher-proof. The Erickson results suggest another hypothesis: namely, that the observed gains made by children on post-test measures are significantly and positively related to the extent to which the instructional program approximates the post-test instrument items. A possible refinement of this hypothesis is that the greater the distance between the instructional system components and the post-test measures, the more the observed gains depend upon teacher commitment.

While studies of the underlying determinants of teacher commitment would be halpful, the question of relevance to our present discussion is: how does the level of commitment, either to the occupation in general, or to a curriculum model in particular, actually "work"? That is to say, if we agree that "commitment" is a high-inference variable, what are the related low inference variables we might observe in teacher -child interaction which might account for the outcomes of a program?

It may be that the greater the commitment, the more unequivocal and consistent the teacher is in making the curriculum-prescribed demands upon the children. Such consistency may in turn lead to (a) easier perception by

the children concerning what behaviors are desired of them, and (b) more effective patterns of teacher reward of these desired behaviors. Conversely, teachers of low commitment may (a) embody expectations which are not perceptible to the children and (b) reward or fail to reward the desired child behaviors so that stable behavior acquisition is impeded. Considered in this frame of reference, large variances in such teacher classroom behaviors as 'explicitness of expected behavior', and 'patterns of rewarding' children would be a function of commitment. That is, for example, if curriculum X calls for consistent reward for behavior X_a, and curriculum Y calls for consistent reward for behavior Y_a (with X_a and Y_a either similar or very different from each other), the commitment hypothesis suggests that teacher variability in dispensing the required rewards could be predicted from the level of commitment to curriculum model X and Y, respectively. The latter hypothesis may in turn be associated with the prediction that commitment is a strong determinant of child behavior acquisition. From informal experience in preschool education, we know the disruptive effects of childrens' constant "testing" of the teacher's limits. A high degree of behavioral consistency and clarity of objectives on the part of the teacher may serve to free both adults and children to procede with new developmental achievements.

These commitment hypotheses become important when we are attempting to implement any curriculum model which is more dependent on teacher skill than the Bereiter-Engelmann approach. The hypotheses are especially relevant to day care for several reasons. First, because the day care teacher must perform many roles, seven, eight or ten hours a day of teacher-proof curriculum is unthinkable, also, she probably needs to be explicit and consistent in each of her roles. Second, the field of preschool education is still open to the

development of curricula which are not tied to limited discrete testable objectives which lend themselves to such teacher-proofness as the academically oriented model. Third, if commitment really is a teacher attribute causally related to teacher behavior, then questions about the commitment and staff morale of the 'long-day' teachers are important ones. Professional associations, informal colleague groups and staff leaders may have significant roles to play in sustaining and elevating teacher commitment and morale. Thus, day care program planners at national and local levels must take into account the importance of facilitating those processes and mechanisms which can be expected to enhance desirable teacher attributes.

Teacher Attitudes and their Correlates

In the following section we turn to research which examines teacher attributes at both the high and low levels of inference.

Teacher attitudes constitute high inference variables which have received considerable attention in the non-empirical preschool literature. However, teacher attitudes appear to be somewhat resistant to definitive research due both to problems of instrumentation and to small sample sizes (see for example Riley & Epps, 1967; pp. 171-172; Cox, 1968).

Using a large sample of Head Start teachers in Texas (N=145) Helge and Pierce-Jones (1968) tested three hypotheses concerning the relationship between teaching experience and teachers' attitudes towards Head Start. The data indicated that "the more experience a teacher has, the greater the probability of perceiving Head Start as effective..." p. 35). The authors interpret the results in terms of the greater insight into the problems of deprivation which accrues with experience. Robert Boger (1967) studied the relationship between the ethnic background of 375 Head Start teachers in Texas

and their attitudes and sensitivity about child behavior. Boger used the Minnesota Teacher Attitudes Inventory (MTAI), and two specially developed instruments: the Behavior Classification Checklist (BCC) and the Child Attitudes Survey (CAS)*.

"The BBC was designed to measure the teachers' tendencies to be sensitive to, troubled by or anxious about various classes of child behavior...Teachers were asked to respond in terms of how "irritating" the behavior was to them rather than whether or not they approved or disapproved of it" (p. 3). The CAS was designed to measure teachers' hypotheses of the causes of child behavior.

Boger's results indicated that Anglo-American teachers were not as eager to be involved with "deprived" children as were their Mexican-American and Negro colleagues, and that the former teachers were not as optimistic about the effectiveness of Head Start as were the latter two groups. The democratic versus authoritarian attitudes dimension as assessed by the MTAI showed that while Anglo teachers appeared less authoritarian in their attitudes towards childrens' behavior than did the Mexican-American or Negro teachers, the differences between the ethnic groups were decreased substantially with increased experience in teaching "deprived" children. Boger also reported that

> Negro teachers' hypotheses concerning the "causes of child behavior were of a more traditional sort. They reflected views of child behavior as being less environmentally and more biogenically determined than did the view of Mexican-American teachers, who in turn were more disposed to these views than were Anglo teachers (p. 12)

*Both the BCC and the CAS are shown in Pierce-Jones, 1965.

Fisher (1967) studied the role conceptions of over three hundred Head Start teachers. Although Fisher labeled her measurement items "role conceptions", they do not describe patterns of behavior expectations. They are treated here as attitudes because they describe response tendencies. Fisher identified three major attitudes: 1) rejecting, 2) warm-reactive and 3) warm-initiating. The latter two categories were distinct in that the 'warm-reactive' attitude emphasized the affective responses of the adult to the child; the 'warm-initiating' attitudes emphasized the adult "assisting the child in gaining information, evaluating the consequences of behavior and making decisions for himself...in the context of warmth and friendliness", (p. 81). Fisher explored the relationship of thses attitudes (high inference variables) to the age, marital and maternal status, type and extent of experience with children of different ages and educational background (low inference variables). Her data indicated that the most significant differences in attitudes were related to the age of the teachers: none of the other variables examined was related to attitudes, "teachers fifty-five or older indicate more rejecting responses" and even "formal training and education appeared to be unrelated" (p. 84). Fisher interprets her findings as reflecting broad generational differences in concepts of child rearing "in the context of the zeitgeist generalized across various institutions and transmitted by varied communication media" (p. 85),

Speer (n.d.) studied 37 day care workers in Minnesota. The dependent variable of the study was the rating given to the S's on a fifteen item 5-point rating scale by her supervisor. The supervisor's ratings involved such aspects of day care worker functioning as: receptivity to supervision, attitudes towards parents, reactions to crisis situations with children, ability to communicate with children, and sensitivity to childrens' feelings.

The independent variables were: the personality of the worker as assessed by the Minnesota Multiphasic Personality Inventory (MMPI), and the workers' attitudes obtained from the Minnesota Teacher Attitude Inventory (MTAI). Information concerning age, education, marital status, socioeconomic status were included in the data analyses.

The results indicated that as a group, the day care teachers compared favorably with the general population on the MMPI. "Analysis also revealed that day care workers whose MMPI scales scores were either "very normal" or who had "2 or more scales moderately or markedly elevated received reliably high supervisors ratings than workers with only mild deviations in their scores" (p. 5). The supervisors ratings were significantly related to MTAI such that higher supervisors' ratings were related to more democratic attitudes. Age was also related to MTAI scores with younger teachers getting higher scores (i.e., more democratic) than older subjects. The MMPI scores were relatively independent of age, which in turn was independent of socioeconomic background of the teacher. Speer assigned weights to each S in terms of her score on the MMPI, her age, and her socioeconomic status. The additive weighting combination of the three variables was highly effective in differentiating the day care workers as rated by their supervisors. The findings of real interest in this study concern the "personality" profiles. The tendency for moderately deviating profiles to be associated with higher supervisor's ratings than the "very normals" and "extremes" is intriguing. Are "very normals" dull, routinized or lacking in style? Are the "moderate" profile types more creative, indivdualistic, active or varied?

Prescott (1965) reported a pilot study of 76 teachers and 250 mothers from 30 day care centers in the Los Angeles area. The study included inter-

views with both teachers and mothers concerning their expectations and standards for selected categories of child behavior. Although no statistical treatment of the data was reported, the interviews revealed some degree of differences between teachers and parents. Prescott pointed out that the areas of behavior in which teachers are more strict highlight the differences between a home and a group setting. For example, teachers had higher standards and expectations of neatness and order than mothers had. Prescott interprets those data partly in terms of the requirements of the group setting in contrast with the home setting. A large group of children, as in a day care center, creates a situation in which high noise level and high disorder would be disfunction. In this frame of reference, adult expectations and standards for certain categories of child behavior can be seen as situationally determined. This interpretation would be strengthened if we found that the standards and expectations of mothers with four or five preschool age children at home lay between mothers of only children and the day care teachers.

In summary, the research outlined above is difficult to synthesize and summarize. Sigel's "commitment" assertion, examined in the light of Ericksons findings appears to harbor many complexities. The possibility that curriculum models vary in the extent to which teacher commitment is required for successful outcomes has been mentioned. It might be added also that we know nothing about the role of charismatic leaders in curriculum model development, implementation and diffusion in early childhood education. It may be for example that curriculum models which could be classified "low" on rationale and logical coherence, are highly dependent upon charismatic leadership to inspire and to 'commit' adopters to their models. The implications of such

possible relationships cannot be explored in depth here, but seem to deserve some attention from research workers in the field. The possibility of relationships between height of teacher commitment and consistency of relevant teacher behavior has been suggested. In the matter of general occupational commitment, more data are clearly needed. Of major interest are questions concerning teacher recruitment, withdrawal and promotion from the ranks. Some Head Start centers known to this observer have experienced annual staff turnover of 75% or more. Reliable information upon which planning could be based would be very helpful.

The research on teacher attitudes is also difficult to summarize and synthesize. There appears to be consistent evidence that both age and experience are related to teacher attitudes. Helge and Pierce-Jones differentiate "experience" in terms of the type of child with whom the experience is obtained. Boger's data showed that ethnic differences in teacher attitudes are reduced by experience. Fisher's finding that age is related to attitudes may hide the experience variable within it. Nevertheless, her data support the Speer finding that younger teachers are more "democratic" than older teachers. It is difficult to ascertain how age "works". Does age represent exposure to difference Zeitgeisten? Is increasing age associated with decreasing tolerance and flexibility in response styles? Is greater age associated with less idealism about children? It is interesting to note that the training of the teacher appears to be unrelated to her attitudes. The possible effects of training on teacher attitudes may "wash out" shortly after completion of the training. Perhaps the type of training (e.g. preservice, inservice, formal or informal) must be examined for different affects on attitudes.

Speer's finding that moderately deviant personality of the teacher in combination with relative youth and middle class background represent teacher attributes which yield superior ratings by their supervisors is of interest. Does this result tell us more about their supervisors than about the teachers? Cross validation of the variables studied with studies of classroom behavior and effects of children would strengthen the findings.

The Prescott pilot study raises some question concerning the determinants of teacher expectations, standards and attitudes. If the situation (e.g. large versus small group of children) is "causing" attitudes, then efforts to change them, if desired, must take situational variables into account. It is common for preschool educators to emphasize the importance of teachers' philosophies to their teaching. It would be interesting to establish to what extent teachers' philosophies are a function of the occupational situations she confronts, or of other factors such as age, experience, intelligence, personality and Zeitgeist.

In general, the results of the attitudes studies are not contradictory; they raise many questions for more refined research in the future.

Teacher Behavior

The levels of inference of the variables used in the study of teacher behavior are more difficult to delineate than are the variables in the study of teacher attributes. The recent research on the behavior of teachers of young children does not easily group itself into categories of levels of inference. For example, the work of Elizabeth Prescott and Elizabeth Jones (1967) of Pacific Oaks College in California constitutes the most comprehensive and significant study of teachers of young children (and is discussed elsewhere in this chapter). It includes both attribute and behavior variables,

each at both high and low inference levels. For the purposes of this discussion the research is treated under two sub-headings: research dealing with teacher classroom behavior only, and research which includes both behavior and attribute variables.

Teacher Behavior in the Classroom

Reichenberg-Hackett (1962) studied aspects of teacher behavior in 10 nursery groups whose clientele varied in ethnic background and socio-economic status. Using and "episoding" method derived from the work of Wight and Barker (1950), Reichenberg-Hackett examined such variables as the teachers' approach, motivating techniques, activities attended to, lessons taught and values. The data revealed wide differences between teachers on all of the variables studied. The investigator identified two variables as important and inter-related: the classroom climate and the teachers' personality, both of which were inferred from the lower inference variables recorded in the episodes, and undefined in the report.

This study contributes several points to the problems under discussion. First, the episoding technique employed in the study appears to be a productive and discriminating approach to the study of teachers of young children. Second, the data reveal the wide range of classroom climates and teachers' personalities to be found in nursery groups. Finally, with these data as backdrop, we can begin to specify how a high inference attribute of the teacher, such as her "personality", is related to low inference behavior variables. For example, Reichenberg-Hackett suggests that there is a relationship between the "smothering of spontaneity" (classroom climate) and the ratio of "encouraging" to "discouraging" (high inference variable) episodes. Can we identify with any precision what it is that a teacher is doing (at the low inference level) when she is being "discouraging"?

There is little reason to have confidence in our ability to change teachers' personalities. If however, we can identify the specific observable behaviors associated with the so-called personality differences between teachers, we can investigate the feasibility of changing the behavior (where necessary), and hence the classroom climates they produce.

Scott (1968) studied 5 teachers of disadvantaged five year old children. The teachers were identified by their supervisors as either "effective" or "ineffective". Using a ecological approach, Scott obtained taped accounts of all of the observable events in two types of behavior settings: the Morning Greeting time when the children arrived and were greeted by the teachers, and the Large Group Activity time when the head teacher worked with the entire group of children.

The data were analyzed in terms of behavior episodes defined as "the readily observed and easily agreed upon units into which behavior falls". Each episode was judged according to a 16-variable category system and assigned a rating. Although no statistical treatment of the data was feasible, some provocative teacher differences were obtained. Scott reports that those teachers rated as more effective had fewer and longer episodes than ineffective teachers. Second, more of the episodes of effective teachers ended with their goals accomplished. Third, "effective teachers showed more positive and less negative emotional feeling tone in their contacts with children than did ineffective ones" (p. 11). An interesting aspect of the data appears in the comparisons of the teachers during the Morning Greeting.

> effective teachers showed a higher participation level than did ineffective ones. They were more involved in the situation...showed a higher level of spontaneity...used more mechanisms to implement their behavior episodes...apparently supplied the child with more cues and provided richer stimulus input than did an ineffective one (pp. 12-13)

In the Large Group Activity, effective teachers "kept their group with them, before them and behaviorally related to them...more often than did ineffective ones" (p. 14). Scott also comments that the behavior of each teacher varied greatly as he or she moved from the Morning Greeting setting to the Large Group Activity setting, suggesting as great or greater "within" a teacher variety of behavior across settings as "between" teachers in one setting. Furthermore, Scott indicated that teachers are more alike during the 'structured' (Large Group) activity than during the less structured Morning Greeting, suggesting strong situational determinants of teacher behavior.

Mueller (1968) conducted an ecological study of directed lessons in a nursery school setting in Detroit. In a special observation room, 6 student teachers were observed guiding small groups of children in special activities. Behavior episodes involving both teachers and childrens' behavior were coded from video-tapes made of the lessons. The teacher behavior was categorized along four dimensions, the most important of which was called Cognitive Demand. The category called Cognitive Demand was defined as teacher behaviors which require children to become involved or in some cases fail to become involved in a thinking process. Analysis of the data showed that the 6 teachers were significantly different on all four dimensions studied, and that teacher behavior was related to child behavior during the special activities. When teachers were high on Cognitive Demand, children exhibited more Task Appropriate behavior and were less often observed to engage in Deviant or Non-involved behavior.

Although Mueller's sample is small, and the study is exploratory, his Cognitive Demand teacher behavior category draws attention to an interesting dimension of teacher-child interaction in the classroom. As indicated above,

the data revealed that teachers with high Cognitive Demand scores had less Deviant, less Non-involved and more Appropriate child behavior in their special activity sessions than low Cognitive Demand teachers. Mueller describes the high Cognitive Demand teachers as on who

> asks questions, makes requests, gives directions and makes demands which challenge the children to think. She tends to balance her request for [thinking] on a continuum ranging from asking simple questions...to [those] which involve reflective responses, analysis and/or synthesis of situations...[she] asks questions about the present and not present. These teachers structure situations so that children can investigate interesting things, interpret their own reactions, predict outcomes of events, and construct objects which require thinking...[she] asks children to think about their own comments, questions and acts...[and] therefore...listens to [them] in order to make this kind of demand. (pp. 90-91)

The low Cognitive Demand teacher

> asks many questions about the here and now ...asks more questions which are judged too easy for the children. This type of teacher made fewer requests for the children to consider their own comments, acts or questions...[she] lacks variety in her approach to inducing children to involve themselves in a cognitive process. (pp. 91-92)

Dorothy Haupt (1966; in press) studied the relationships between childrens' questions and nursery school teachers' (N=8) responses. Haupt recorded all instances of child-initiated contact with adults in a teaching role during a specified number of hours over a 30 school day period. The units of interaction were analyzed in terms of their sequence, form, content, and function. Among the findings of interest Haupt reported that nursery school teachers tend to supply explicit answers to children's questions, and do not attempt to involve children actively in the search for answers to their own questions. Differences were obtained in the interaction variables in

in different activity settings in which observations were made. Haupt summarizes her results as follows

> nursery teachers...tend to reinforce their position as a prime verbal source of information ...their acts of teaching are not deliberately designed to provoke divergent thinking or probing on the part of children. Teachers frequently accepted questions as they were stated showing limited discernible evidence of the need to probe behind the child's verbal facade for meaning and gaps in understanding (p. 26, in press).

It appears that the teachers of the Haupt sample were like the teachers low in Cognitive Demand in the Mueller study.

The small sample sizes of the four studies outlined above tend to inhibit firm generalizations from their findings. The Reichenberg-Hackett work raised questions about the relationship between low-inference teacher behavior variables, teacher personality and classroom climate. From Scott's research it is possible to infer that teacher personality or style variables are related to supervisors ratings, and that a large proportion of teacher variance might be attributable to the situation in which the teacher is observed. Haupt's research also yielded significant situational differences in teacher behavior. Confirmation of the Power of situations to determine behavior would be useful. If, for example, a given type of classroom situation 'brings out' unwanted teacher behaviors, then curriculum models which require that kind of activity or situation to occur frequently might coerce a high proportion of undersirable teacher behavior. Whether or not certain 'personality' types can "rise above" situational coersion might describe an important predictor of teacher effectiveness.

The research of Mueller and Haupt seems to extend our thinking beyond the pitfalls of 'personality' variables. It seems to be indicated by their research, and also from the work of Marion Blank (1968; 1969) that teachers

need help in developing skill with a type of Socratic dialogue which extends and stretches the information processing skills of young children, and which also seems to be conducive to a constructive classroom atmosphere.

Teacher Behavior in Contrasting Curriculum Models.

As indicated earlier in this discussion, research on the impacts of contrasting curriculum models on children are treated here as studies involving ultra-high inference teacher variables. There are a few studies in which lower inference teacher variables have been included in the examination of program impacts. Seifert (1969) studied the classroom behavior of teachers (N=4) in two curriculum models: the Weikart Piaget-based moderately structured Cognitive curriculum, and the highly structured Bereiter-Engelmann academically-oriented curriculum model. From the curriculum model specifications, differences on 5 scales of verbal interaction between teachers and children were expected. Only one difference between teachers in the two models was significant, namely, the total number of statements per minute was significantly greater in the Bereiter-Engelmann program than in the Cognitive program. Seifert pointed out that the data generally failed to support the assumption that contrasint curriculum models differ in the classroom events they provide.

Another small study by Katz (1968; 1969) compared the behavior of teachers (N=6) in curriculum models labeled "experimental" and "traditional" respectively. The teacher observations revealed that the curriculum model specifications were not fully implemented in the classroom. On six of the eight major teacher variables studies, there were significant differences between the 3 teachers within a curriculum model. The teacher observational data also showed significant relationships between teacher behavior and the activity setting in which the teachers were observed.

Louise Miller and her associates at the University of Louisville have reported on a two year comparative study which included observations of both teachers' behavior and childrens' activities in four curricula used for disadvantaged preschool children: Bereiter-Engelmann, DARCEE, Montessori and Traditional Head Start. Miller studied the extent to which teachers (N=14) implemented the curriculum models correctly. The treatment monitoring was based on observations of teaching techniques, grouping and classroom activities, using both a tally sheet and video taping of classroom behavior.

The observations showed that the Bereiter-Engelmann teachers were significantly higher in the frequency of use of verbal instructional techniques. Although teachers in the Bereiter-Engelmann program were expected to be lowest of the four on "manipulation of materials", they were not. Montessori teachers were highest in "manipulation", as expected, but DARCEE teachers were lowest, with Traditional and Bereiter-Engelmann teachers in second and third place respectively. Relative to other types of teacher behavior, Traditional teachers were the highest of the four curriculum models in the use of conversation as a teaching technique. Based on their observations of both the teachers and the childrens' activities, the investigators state that the four contrasting models were adequately implemented.

Studies by Berger (1969), DiLorenzo (1969) and Jensen and Kohlberg (1966) also include efforts to establish relationships between the curriculum model adopted and teacher's classroom behavior.

In summary, two small studies suggest that the classroom behavior of teachers is not fully predictable from the specifications of a curriculum model. One study finds high correspondence between the expected teacher

behavior and the model. Considering the strong pressure for the "most effective" curriculum models, the state of our knowledge of their implementation is very poor. The results of the Planned Variation Experiment with Head Start curriculum in progress under the Office of Child Development, will be very welcome additions to our knowledge.

Effects of Teachers on Children

In this section we turn to research which includes both changes in childrens' behavior and investigation of teacher behavior. [The work of Prescott and Jones, 1967; and Beller, (1969) is discussed elsewhere in this chapter.]

John Pierce-Jones and his associates (1965) conducted a comprehensive study of the Head Start programs in Texas in 1965 (see also Linn, 1966; Boger, 1966). While it is clear from the interpretation of the large body of data that teacher behavior (as well as attitudes and background) predict changes in the children, precise descriptions of which teacher variables are associated with the changes are difficult to extract from the multiple regression analyses presented. For example, the ethnic background, experience and attitudes of the teacher interact with characteristics of the children in the production of behavior changes. The work of the Texas group presents convincing, although non-specific evidence of the importance of all levels and types of teacher variables for childrens' growth.

Conners and Eisenberg (n.d.) reported a study of 38 teachers who participated in a summer Head Start program. Teacher observations were obtained with the "episoding" technique developed by Reichenberg-Hackett (1962). Each episode was scored for one or more of the following variables: (1) Communication; (2) Management, such as altering a child's environment; and (3) Encouragement. Groups of interconnected episodes were scored for the presence of nine Values on the basis of the implicit goal the activities were judged to serve. Teachers were classified as high, medium or low on each of the variables on the basis of rankings of the scores for the entire group of teachers. In addition, each teacher was given a global rating on a

six-point scale on the basis of warmth vs. coldness, permissiveness vs. restrictiveness, active vs. passive, and variety (imaginativeness, versatile) vs. non-variety (stereotyped lessons) which were eventually summed into an overall score designating the teachers as "good" vs. "bad". The "effect" of the teacher was assessed by the changes observed in pre and post test scores of the children on the Peabody Picture Vocabulary Test (PPVT).

The major findings of the study are

1. Children of teachers high on Communication showed significantly more positive gains in PPVT than children on other groups.
2. Teachers high on Communication to individuals (versus groups) produced significantly less growth than other teachers and similarly teachers high on Communication to the group produced significantly more gains than other teachers.
3. Teachers high on Encouragement produced less improvement than other teachers.
4. Teachers medium on the Value "self-confidence and self-concept" produced significantly more growth in PPVT than teachers high on this Value.
5. Teachers high on the Value "intellectual activity" produced greater gains than medium or low teachers on PPVT ($p < .005$).

Summarizing the data, Conners and Eisenberg point out that

> when PPVT changes of high and low intellectually oriented teachers are considered, it is teachers who are <u>also</u> high on global ratings of warmth, etc., who produce the most change; while high intellectual teachers who are low on warmth produce about the same amount of change as low intellectual teachers... Clearly then, neither warmth nor a strict lesson orientation by themselves should be expected to facilitate intellectual and adaptive growth in children (p. 12-13).

Smothergill and her associates experimentally varied communication styles of 10 student and trained nursery school teachers for a 4-week experimental teaching program. The communication styles studied were called Elaborative and Non-elaborative. Teacher communications to the children during the experimental sessions were taped, transcribed, and assigned scores in four main categories:

1. Directive statements, i.e. those involving a minimum of information necessary for the teacher to direct the action or behavior of the child
2. Elaborative statements were those which conveyed more information than was essential for completing a task, etc.
3. Eliciting statements, i.e. those consisting of requests from the teacher for verbal feedback from the child;
4. Non-information support statements included only the statements intended to show recognition of a child, but conveyed no new information.

A pre-post test battery of tasks was developed to test changes in the childrens' "tendency to reflect on alternative solutions to problems and to choose among various options" (pp. 3-4). The children were from a day care center, and ranged in age from three and a half to just over five years. Based on pretest scores on the test battery, the children were ranked and assigned in pairs to either Group I (Elaborative Style) or Group II (Non-elaborative style).

The teacher observations showed that the teacher Communication styles

were reliable as well as discriminable. The child observations showed that Group I (Elaborative) children used Elaborative Statements more frequently than Group II (Non-elaborative) children. Group II children gave a significantly greater number of total Direct statements. Thus the two groups of children seemed to differ from each other in the same way that their teachers differed in their Communication Styles.

The results of the pre-posttest comparisons were mixed. Group I children were significantly better than Group II children on the similarities task. Group II children decreased significantly in the Story Elaboration task as measured by the number of words used in telling a second story in the posttest. Group I children did not exhibit such a decrease. The investigators suggest that participation in the Non-elaborative Group (II) may have actually discouraged the children from verbalizing in the posttest sessions.

The authors summarize their work by suggesting that

> nursery school teachers who teach elaboratively and respond positively to their children's elaborative verbalizations, have children who behave more elaboratively in their classrooms, and in some instances at least, approach problem solving tasks more elaboratively than children trained in Non-elaborative ways (p.8)

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